CLAIMS

1. Use of a substance, which binds to and initiates signaling of the human growth hormone (hGH) receptor or a substance, which stimulates release or potentiates the activity of endogenous hGH, for the manufacture of a medicament for treatment and/or prevention of a Parkinsonism-Plus Syndrome.
2. Use according to claim 1, wherein the Parkinsonism-Plus Syndrome is selected from the group consisting of Progressive Supranuclear Palsy (PSP), Multiple System Atrophy (MSA), Parkinson's-amyotrophic lateral sclerosis-dementia of Guam, Generalized Lewy body disease, Corticobasal ganglionic degeneration, Alzheimer's/Parkinson's overlap syndrome, Huntington's disease: rigid variant, Hallervorden-Spatz disease, and Gerstmann-Strausler syndrome.
3. Use according to claim 2, wherein the Parkinsonism-Plus Syndrome is Multiple System Atrophy.
4. The use according to any of the preceding claims, wherein the substance is selected from:
   a) human growth hormone;
   b) a fragment of (a) which has agonistic activity on the hGH receptor;
   c) a variant of (a) or (b) which has at least 70% sequence identity with (a) or (b) and which has agonistic activity on the hGH receptor;
   d) a variant of (a) or (b) which is encoded by a DNA sequence which hybridizes to the complement of the native DNA sequence encoding (a) or (b) under moderately stringent conditions and which has agonistic activity on the hGH receptor; or
   e) a salt or functional derivative of (a), (b), (c) or (d) which has agonistic activity on the hGH receptor.
5. The use according to any of the preceding claims, wherein the substance is a naturally-occurring human growth hormone.
6. The use according to any of claims 1 to 4, wherein the substance is recombinant human growth hormone.
7. The use according to claim 4 or 6, wherein the fragment is a C-terminal fragment of hGH.
8. The use according to claim 7, wherein the C-terminal fragment comprises amino acids 177 to 191 of hGH.
9. The use according to claims 4 or 6, wherein the variant of human growth hormone is methionyl human growth hormone which has an additional methionine residue at the N-terminus of human growth hormone.

10. The use according to claim 4 to 6, wherein the fragment of human growth hormone is a human growth hormone lacking the 15 amino acid residues from Glu32 to Glu46.

11. The use according to claim 4, wherein the fragment is a truncated human growth hormone lacking the first eight amino acid residues at the N-terminus.

12. The use according to claim 4, wherein the fragment is a truncated human growth hormone lacking the first 13 amino acid residues at the N-terminus.

13. The use according to claim 4, wherein the functional derivative comprises a dimer of human growth hormone selected from the group consisting of a disulfide dimer connected through interchain disulfide bonds, a covalent irreversible non-disulfide dimer, a non-covalent dimer, and mixtures thereof.

14. The use according to claim 4, wherein the functional derivative is a chemical derivative of human growth hormone.

15. The use according to claim 14, wherein the human growth hormone is acetylated at the N-terminus.

16. The use according to claim 14 or 15, wherein the human growth hormone is deaminated.

17. The use according to any of claims 14 to 16, wherein the human growth hormone is sulfoxidized at one or more methionine residues.

18. The use according to any of the preceding claims, wherein the growth hormone is administered at a dosage of about 0.1 to 10 mg per person per day or about 0.5 to 6 mg per person per day.

19. The use according to claim 18, wherein the growth hormone is administered at a dosage of about 1 mg per person per day.

20. The use according to claim 18 or 19, wherein the growth hormone is administered daily or every other day.

21. Use according to any of the preceding claims, wherein the growth hormone is administered at alternating daily dosages, the first dosage being higher than the second dosage.

22. Use according to claim 21, wherein the first dosage is about 1 mg per person and the second dosage is about 0.5 mg per person.

23. Use according to any of the preceding claims, wherein the weekly dosage of growth hormone is about 6 mg per person or about 5 mg per person or about 4.5 mg per person.

24. Use according to any of claims 1 to 3, wherein the substance is selected from:

a) a human growth hormone releasing hormone (hGHRH);

b) a fragment of (a) which has agonistic activity on the hGHRH receptor;

c) a variant of (a) or (b) which has at least 70% sequence identity with (a) or (b) and which has agonistic activity on the hGHRH receptor;

d) a variant of (a) or (b) which is encoded by a DNA sequence which hybridizes to the complement of the native DNA sequence encoding (a) or (b) under moderately stringent conditions and which has agonistic activity on the hGHRH receptor; or

f) a salt or functional derivative of (a), (b), (c) or (d) which has agonistic activity on the hGHRH receptor.

25. Use according to claim 4 or 24, wherein the functional derivative comprises at least one moiety attached to one or more functional groups, which occur as one or more side chains on the amino acid residues.

26. Use according to claim 25, wherein the moiety is a polyethylene glycol (PEG) moiety.

27. Use of an IGF (Insulin-like Growth Factor), for the preparation of a medicament for treatment and/or prevention of Parkinsonism-Plus Syndromes, in particular of Multiple System Atrophy.

28. Use according to claim 27, wherein the IGF is selected from IGF-I or IGF-II.

29. Use according to claims 27 or 28, wherein the medicament further comprises and IGFBP (Insulin-like Growth Factor Binding Protein), for simultaneous, sequential, or separate use.

30. Use according to claim 29, wherein the IGFBP is IGFBP3.

31. Use according to any of claims 27 to 30, wherein the medicament further comprises a substance according to any of claims 1 to 26.

32. Use of an nucleic acid molecule comprising the coding sequence of a substance which binds to and initiates signaling of the human growth hormone (hGH) receptor or a substance which stimulates release or potentiates the activity of endogenous hGH for the preparation of a medicament for the treatment and/or prevention of a Parkinsonism-Plus Syndrome, in particular Multiple System Atrophy.

33. The use according to any of the preceding claims, wherein the medicament is administered subcutaneously.

34. The use according to any of claims 1 to 32, wherein the medicament is administered intramuscularly.

35. Use according to claim any of the preceding claims, wherein the substance is administered with an auto-injector.

36. Use of a vector for inducing and/or enhancing the endogenous production of a substance which binds to and initiates signaling of the human growth hormone (hGH) receptor or a substance which stimulates release or potentiates the activity of endogenous hGH for the preparation of a medicament for the treatment and/or prevention of a Parkinsonism-Plus Syndrome, in particular Multiple System Atrophy.

37. Use of a cell that has been genetically modified to produce a substance which binds to and initiates signaling of the human growth hormone (hGH) receptor or a substance which stimulates release or potentiates the activity of endogenous hGH for the preparation of a medicament for the treatment and/or prevention of a Parkinsonism-Plus Syndrome, in particular Multiple System Atrophy.

38. A method for treating a Parkinsonism-Plus Syndrome, in particular Multiple System Atrophy, comprising administering to a patient in need thereof an effective amount of a substance which binds to and initiates signaling of the human growth hormone (hGH) receptor or a substance which stimulates release or potentiates the activity of endogenous hGH.